

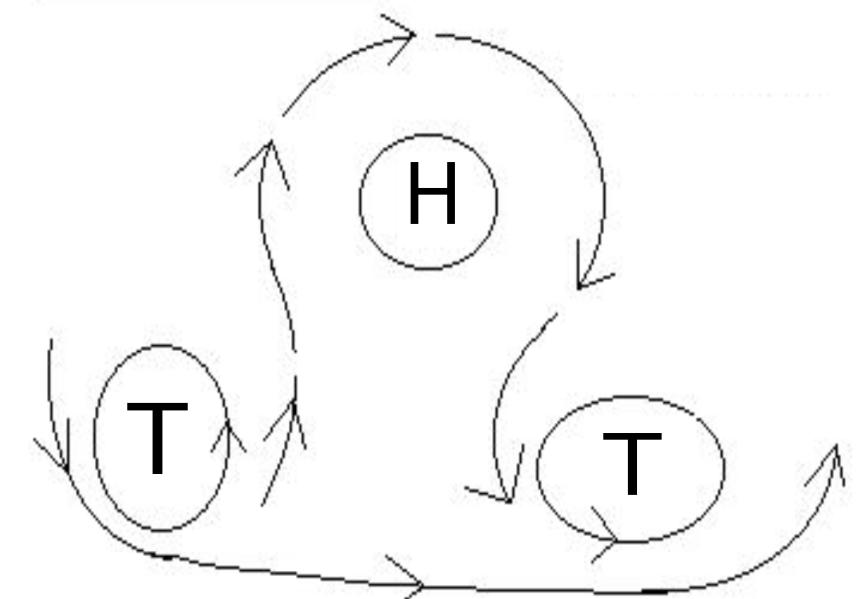


zu warm – zu trocken – zu nass

Großwetter im Wandel

Peter Hoffmann

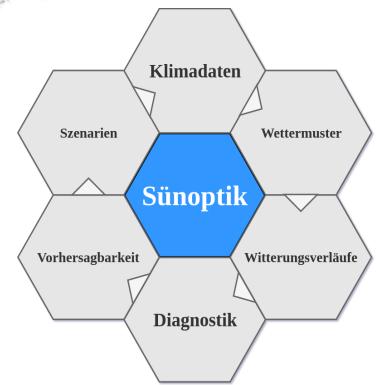
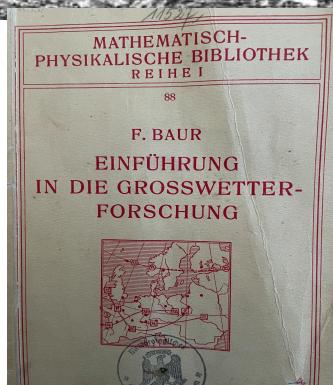
Hydroklimatische Extreme





Telegrafenberg

ehem. Meteorologisches Observatorium





Süringwarte

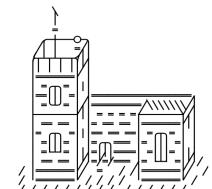
operationelle Auswertungen

der

aktuellen Witterungsverläufe

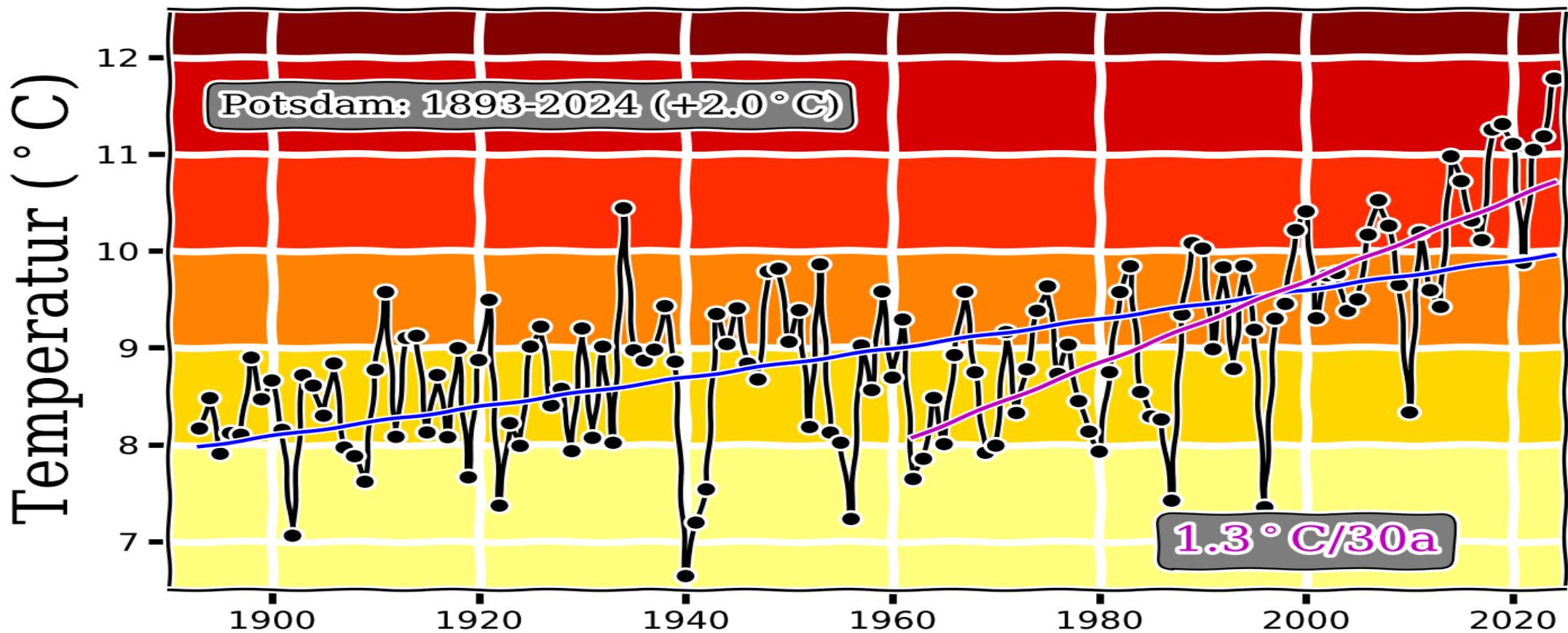
und

Klimafolgen



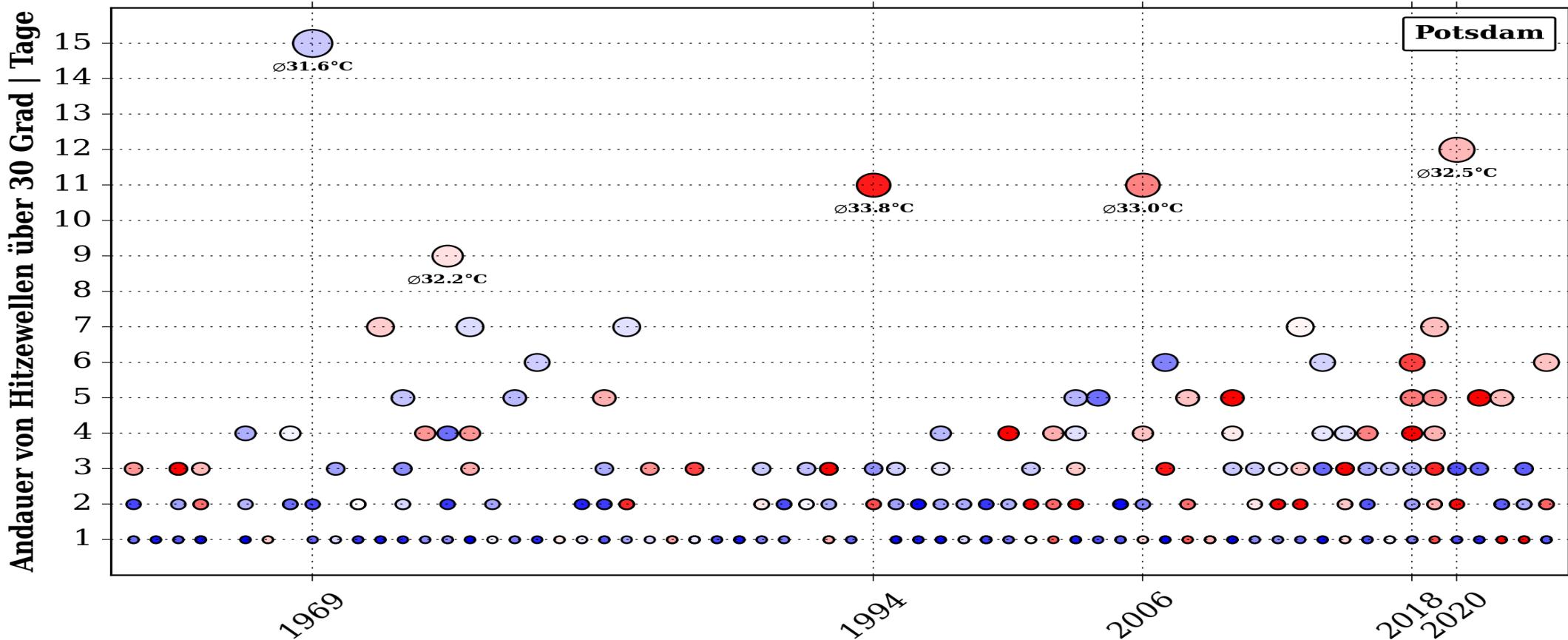


Säkulare Klimamessreihe





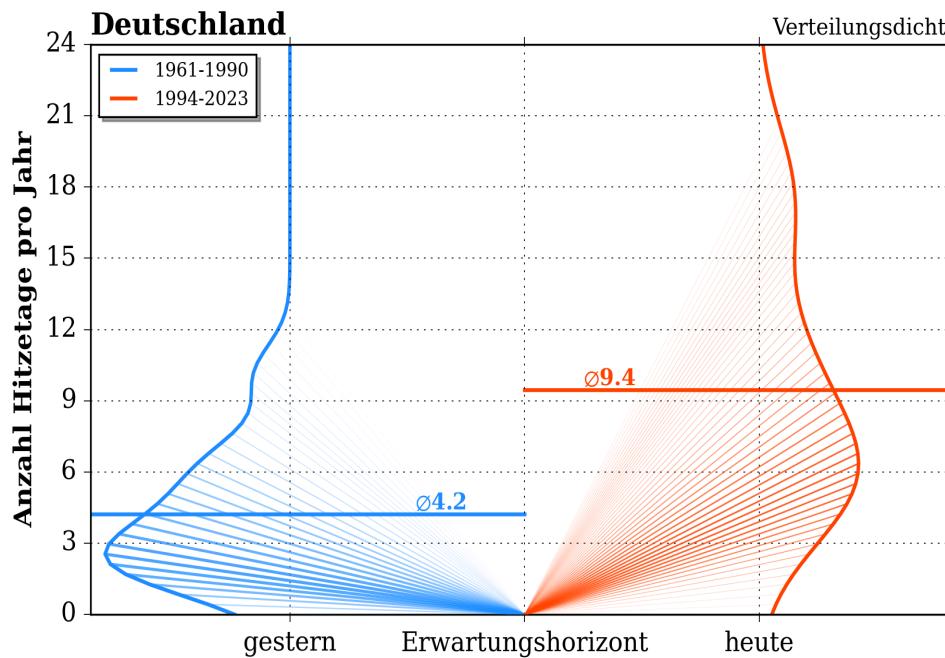
Hitzewellen



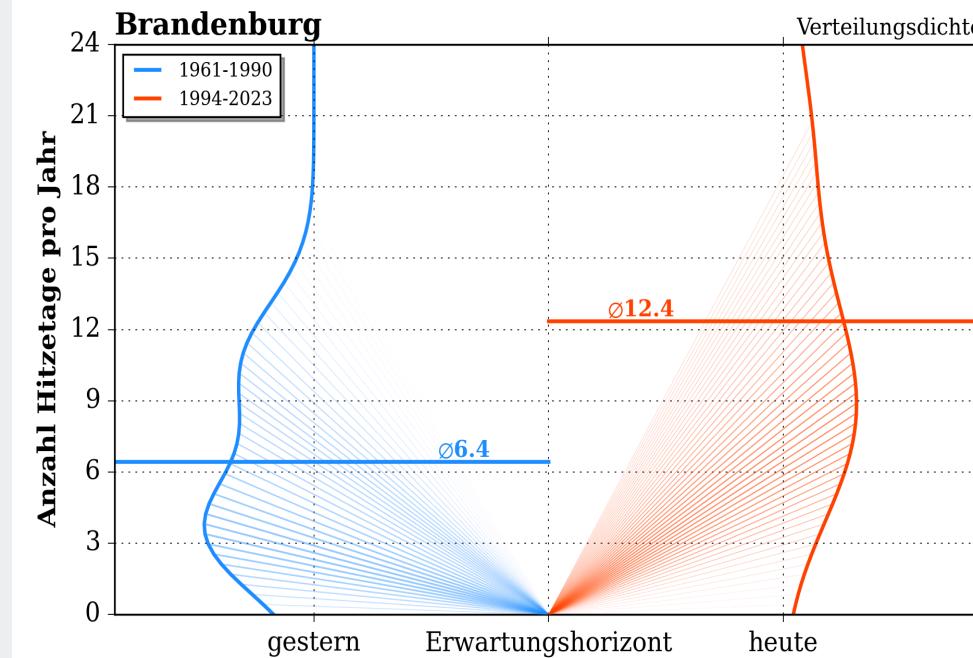


Erwartungshorizont für Hitzetage

Deutschland

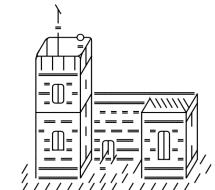
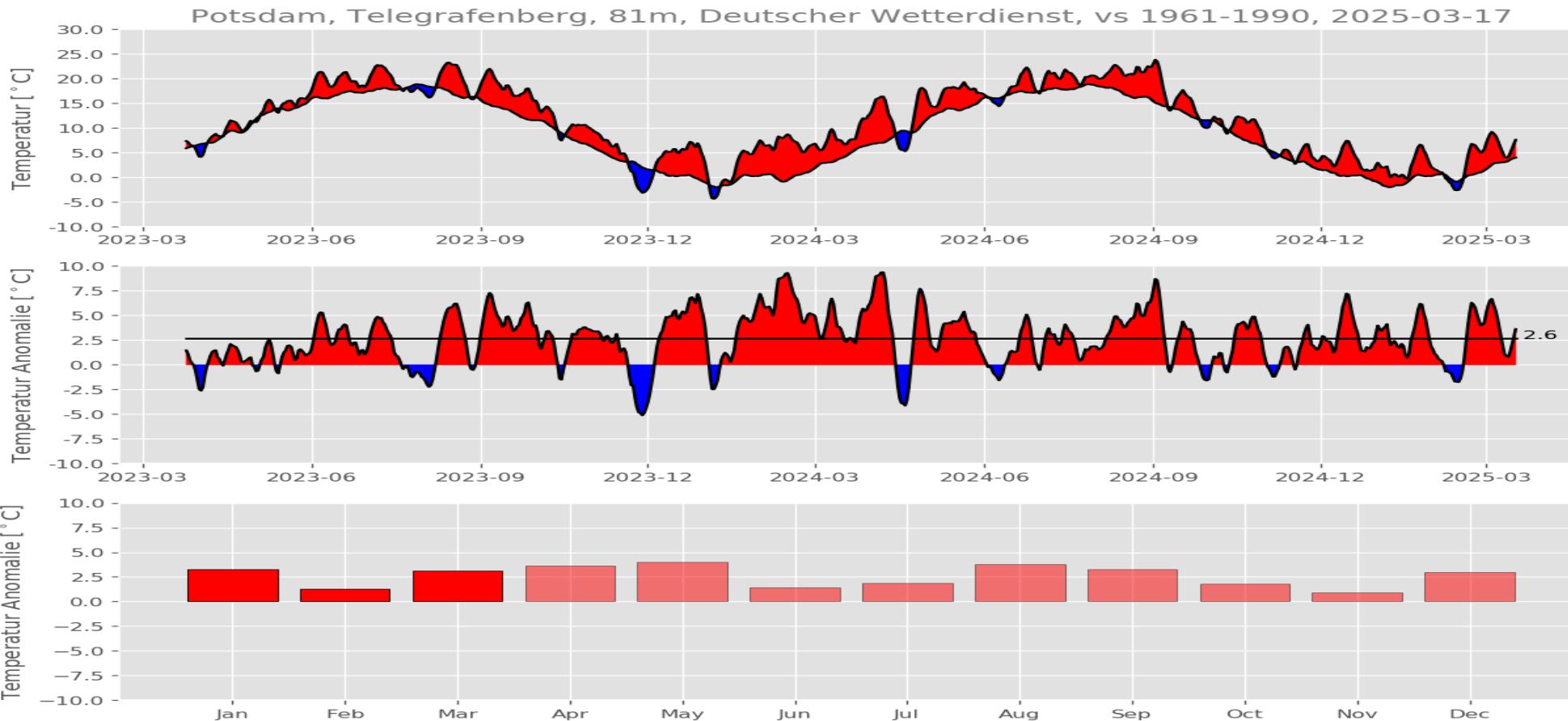


Brandenburg





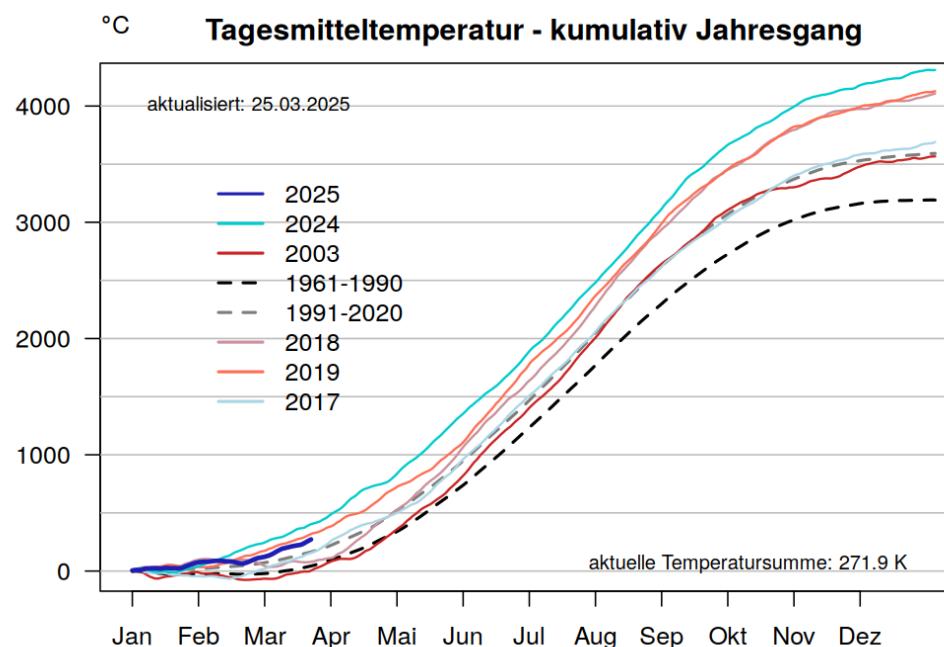
Aktuelle Witterungsverläufe im zeitlichen Kontext



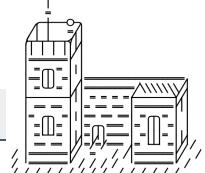
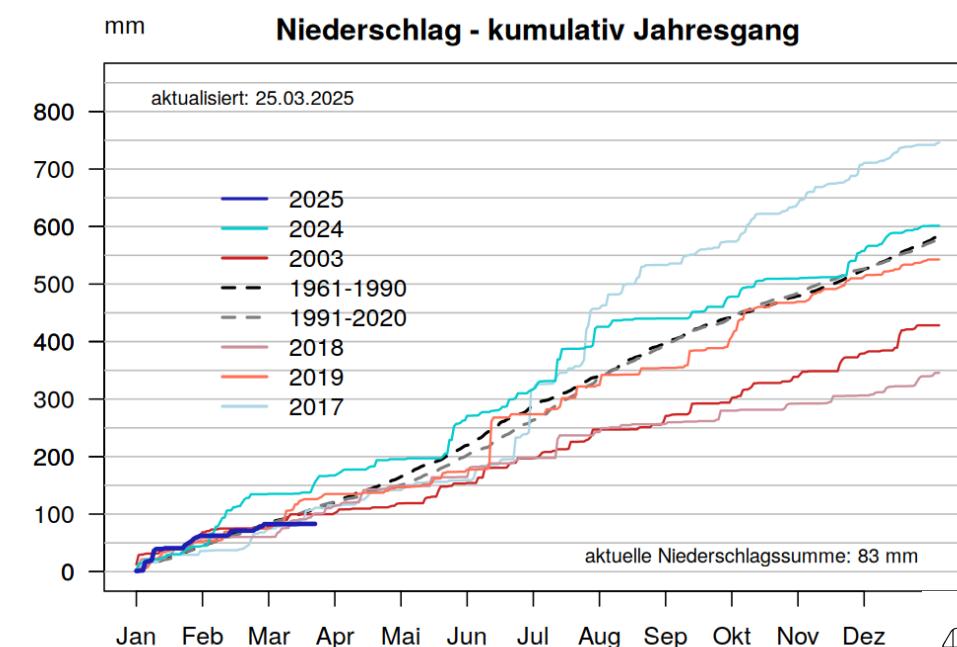


Aktuelle Witterungsverläufe im zeitlichen Kontext

Temperatursumme



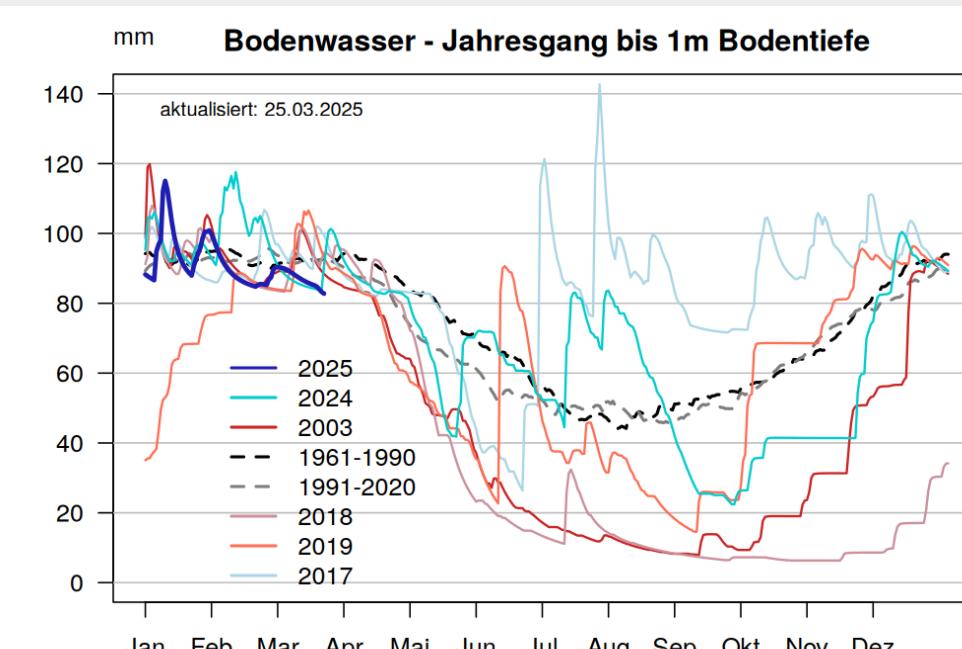
Regensumme



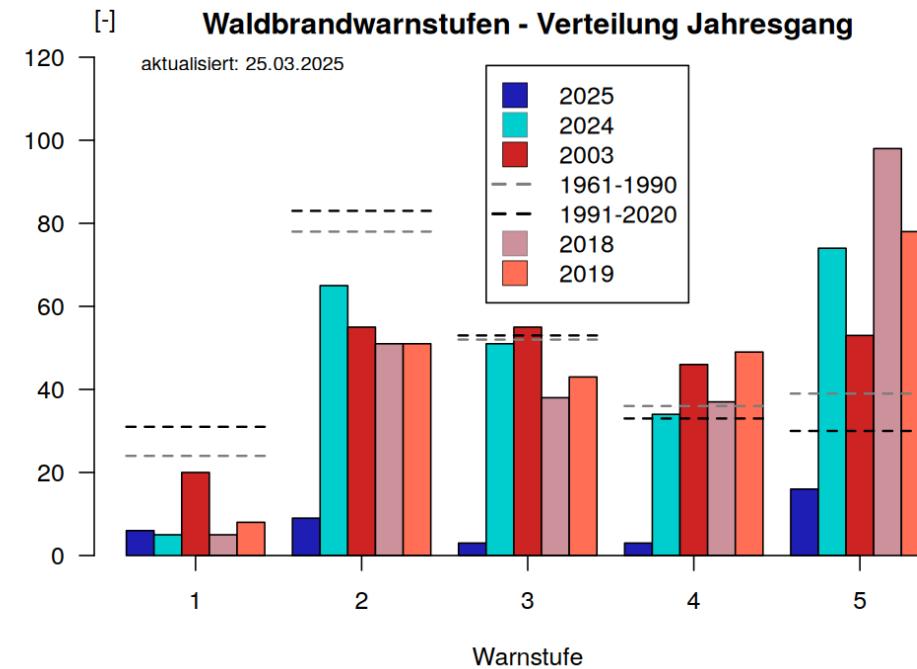


Aktuelle Witterungsverläufe im zeitlichen Kontext

Bodenwasser

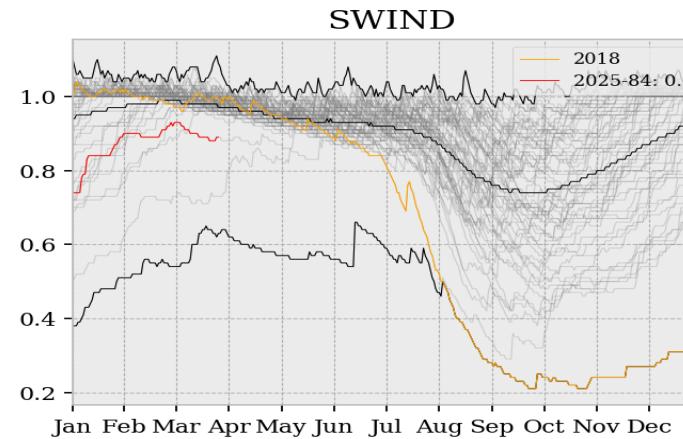
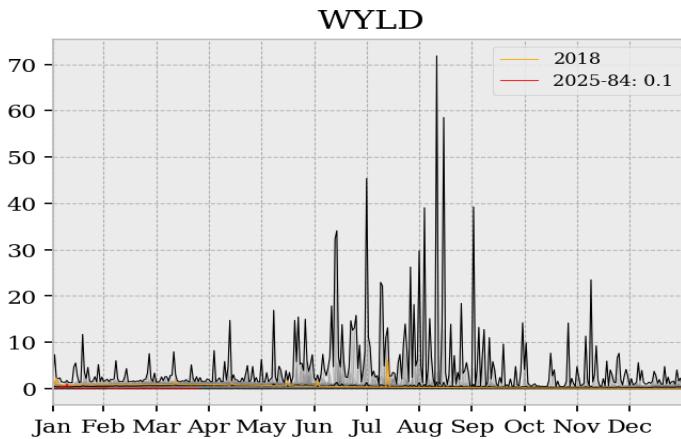
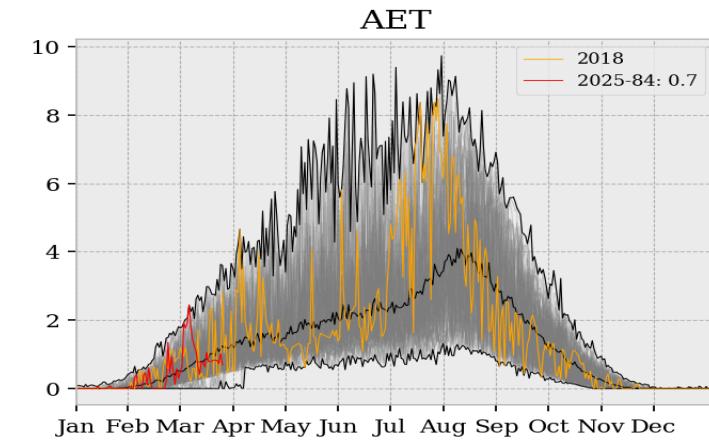
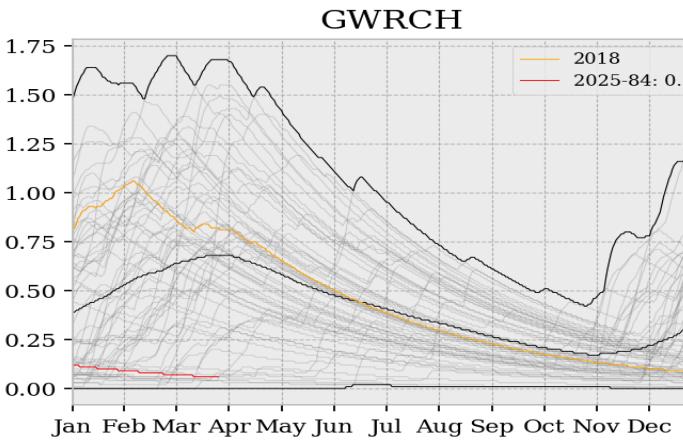
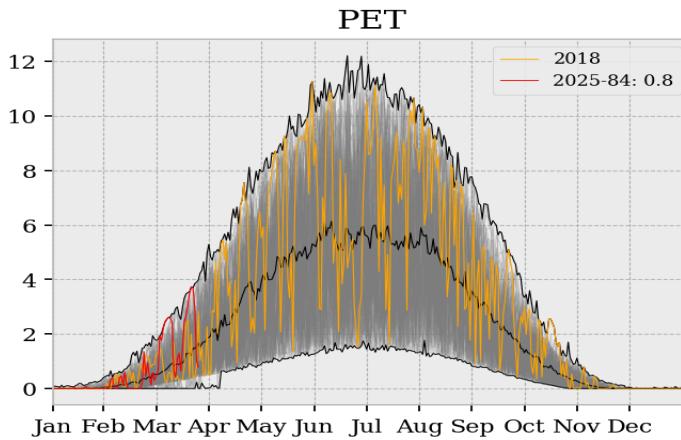


Waldbrandindex



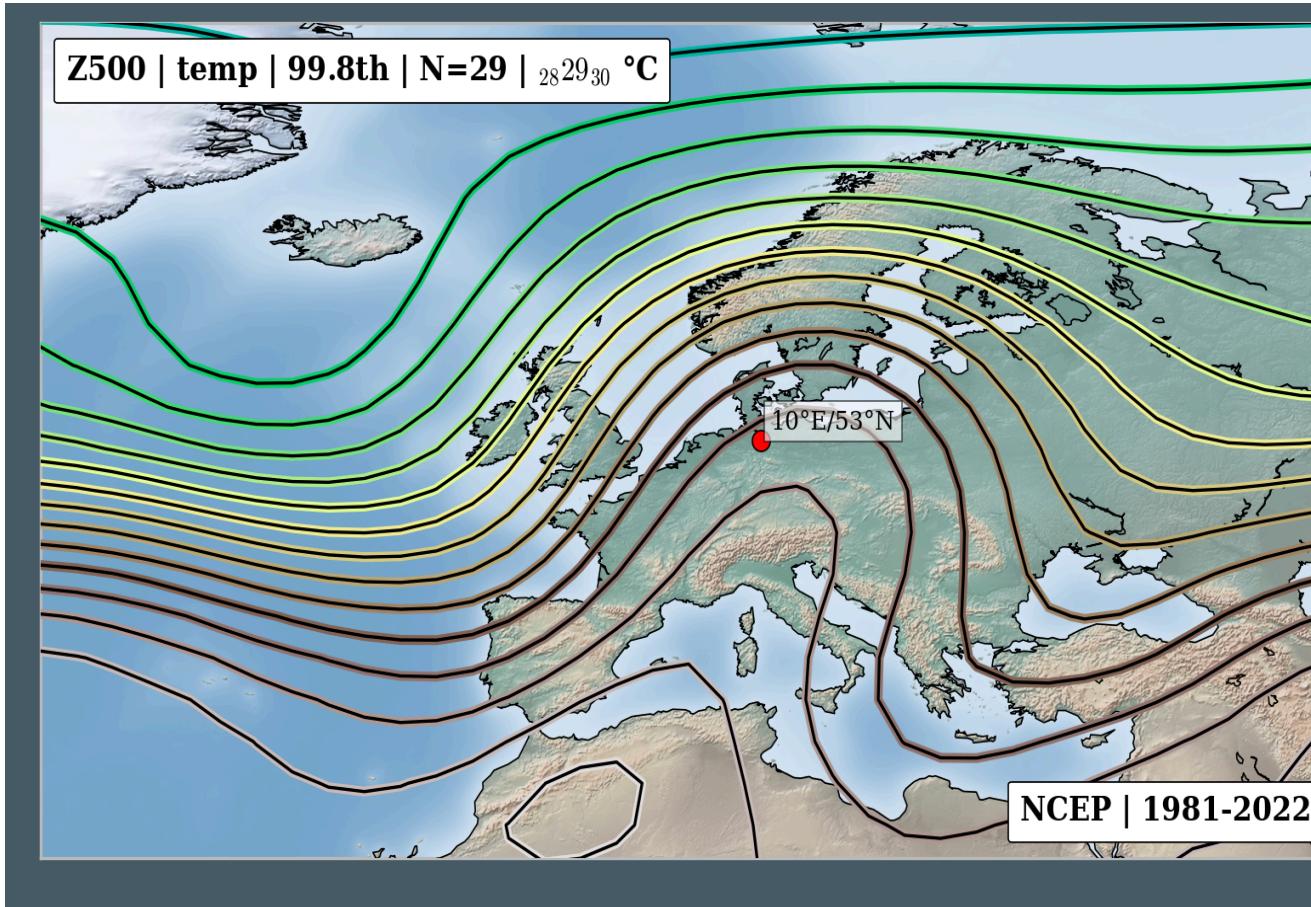


Aktuelle Witterungsverläufe im zeitlichen Kontext



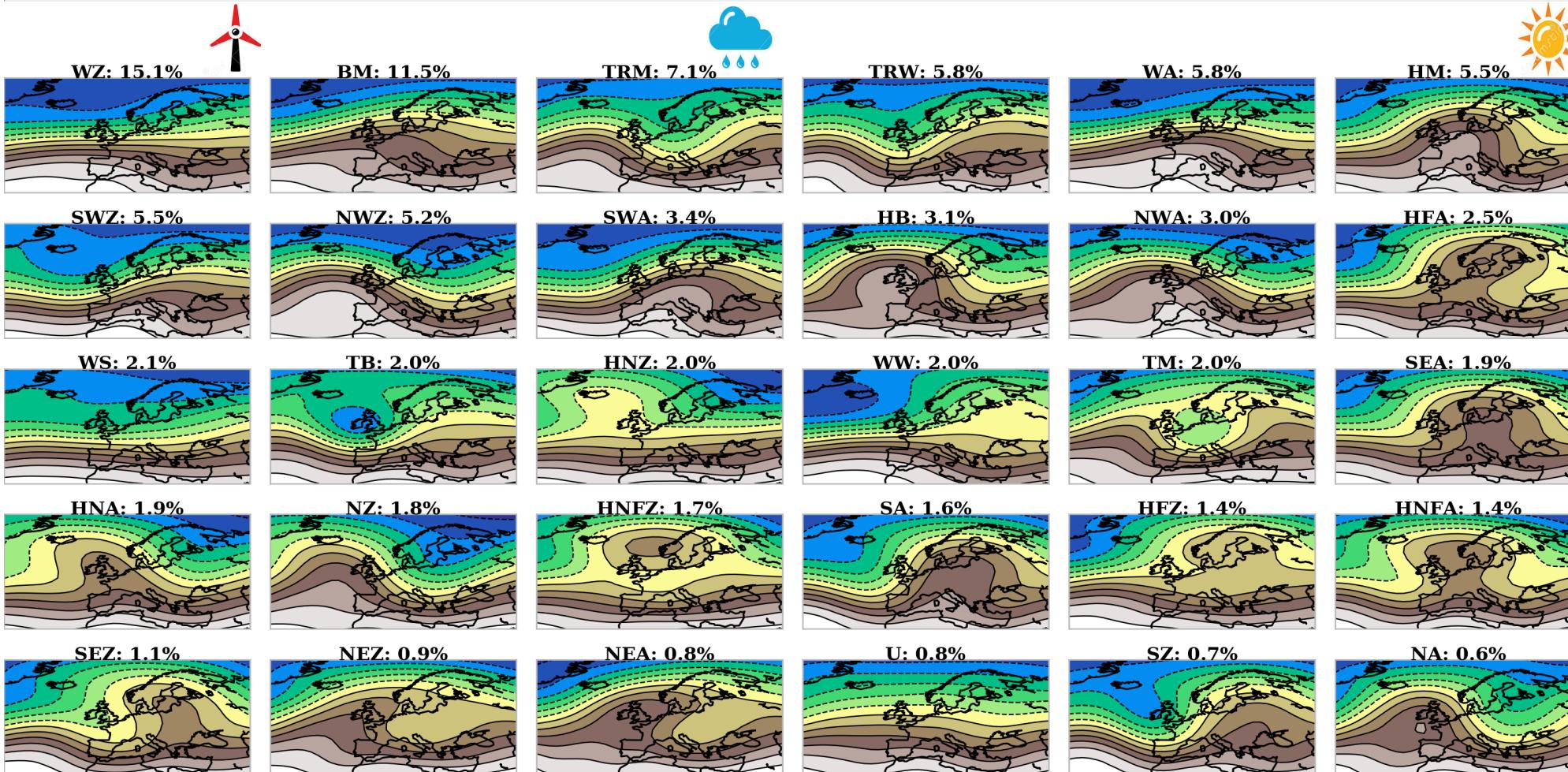


Aktuelle Witterung im großräumigen Kontext



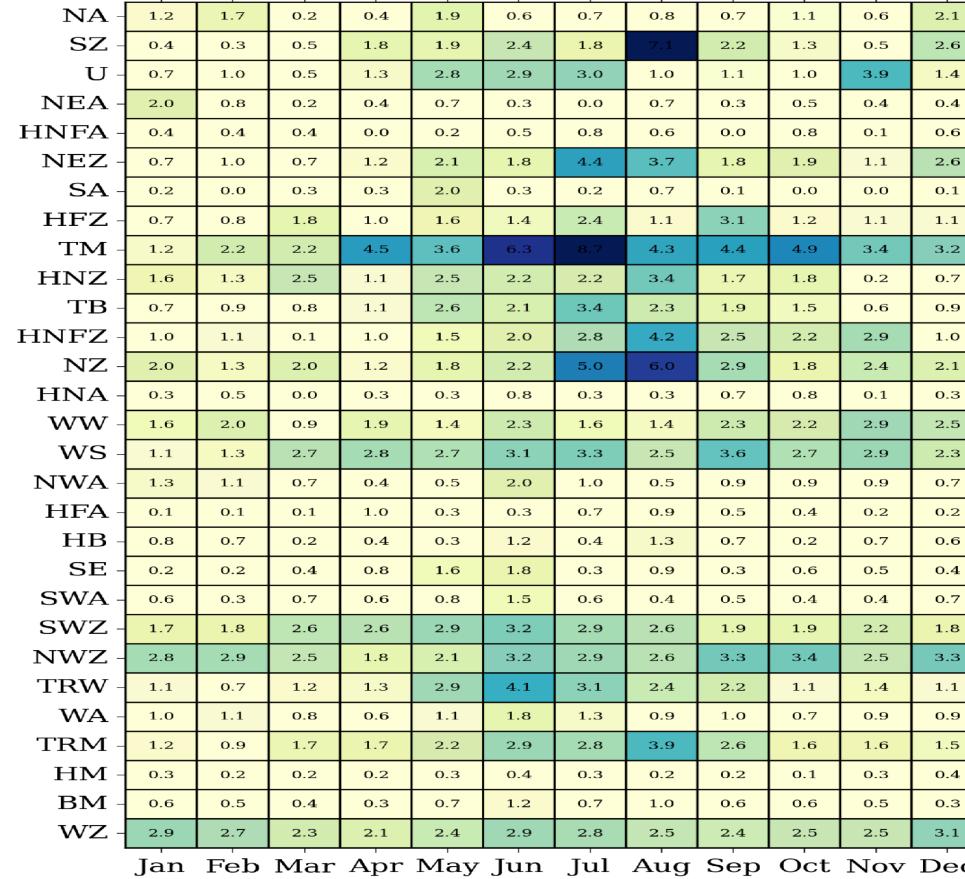
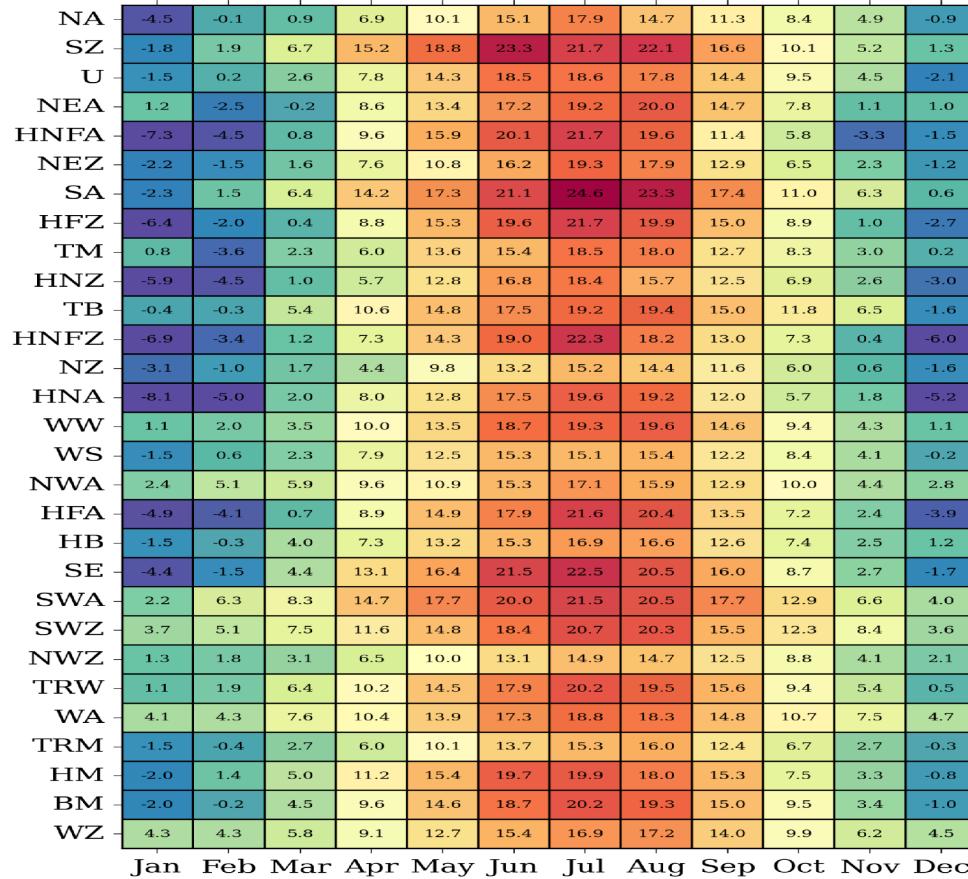


Katalog von Großwetterlagen





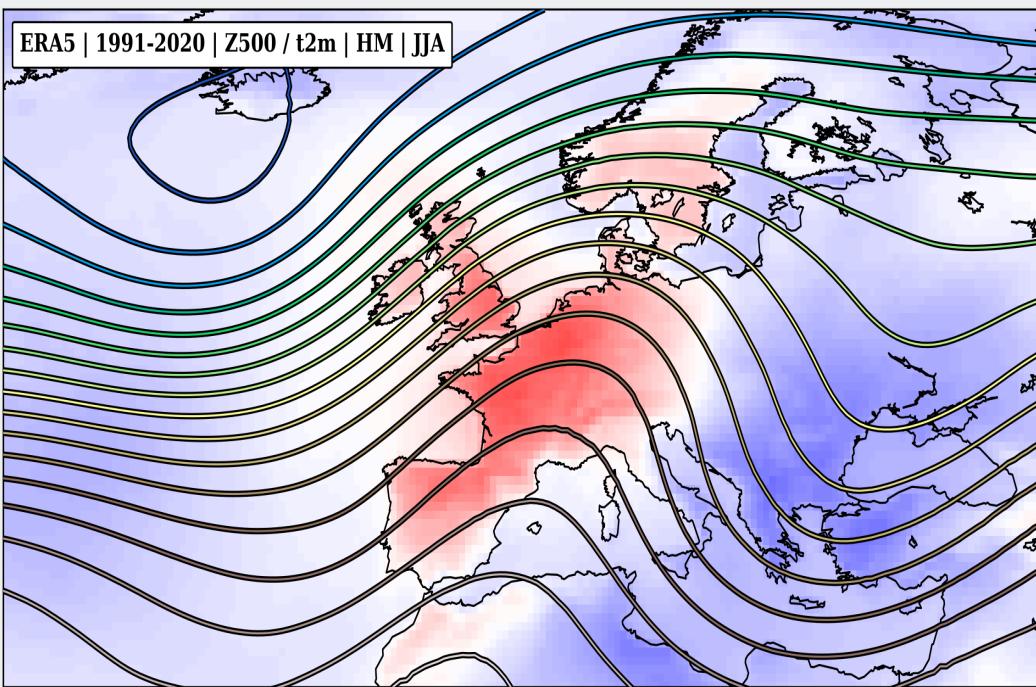
Lokaler Witterungscharakter - Potsdam



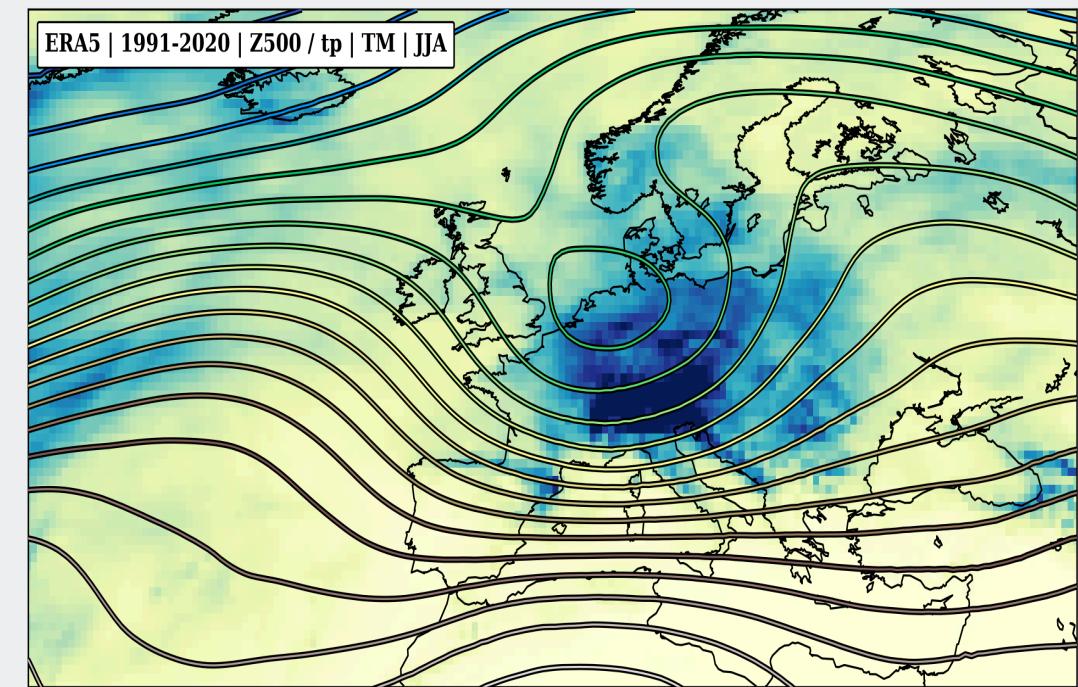


Regionaler Witterungscharakter

Hoch Mitteleuropa

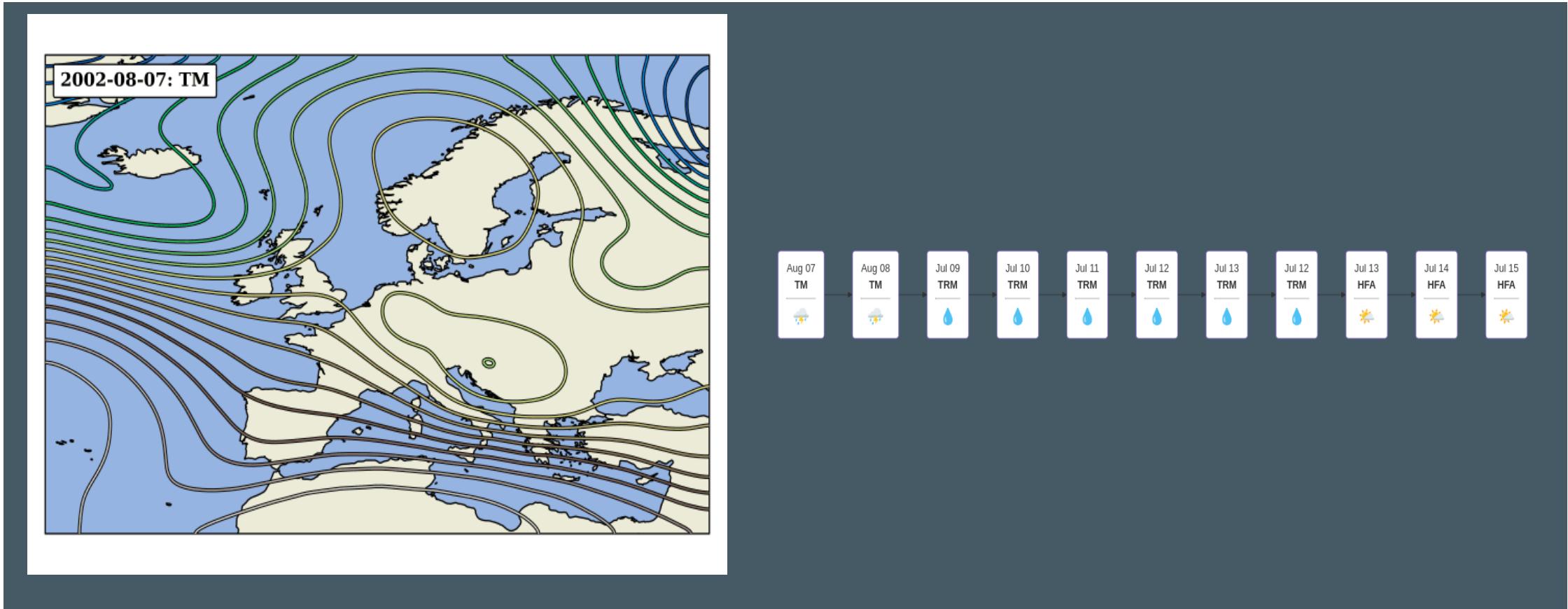


Tief Mitteleuropa





Kritische Abfolgen – August 2002

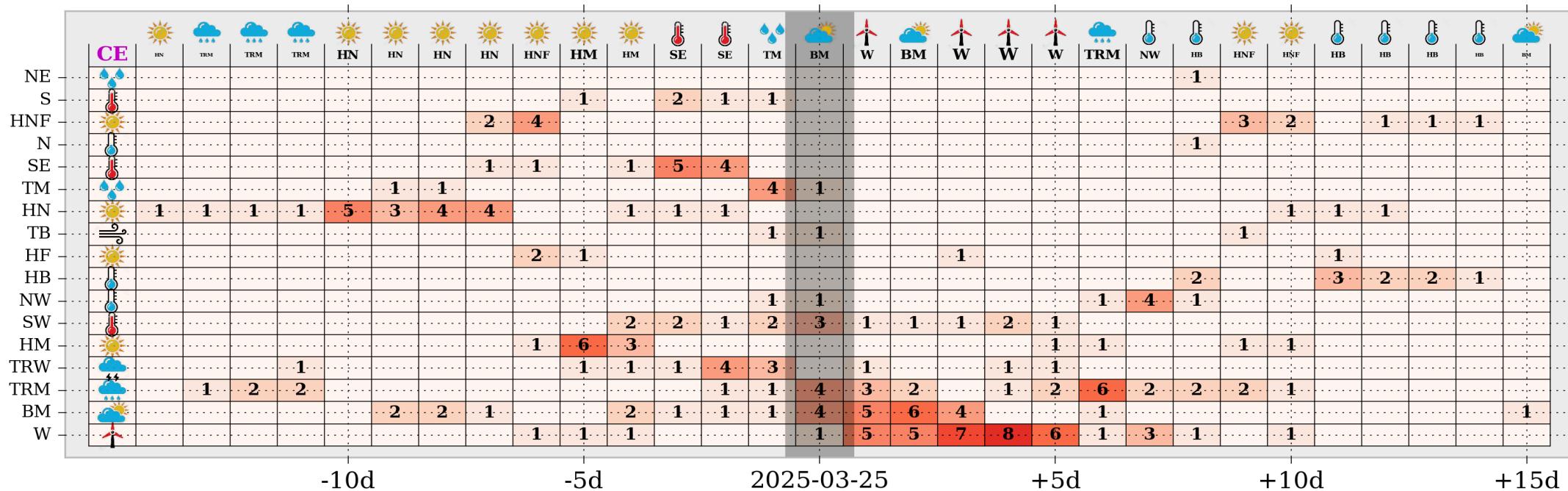




Vorhersage – Wiedererkennung von Wetterlagen

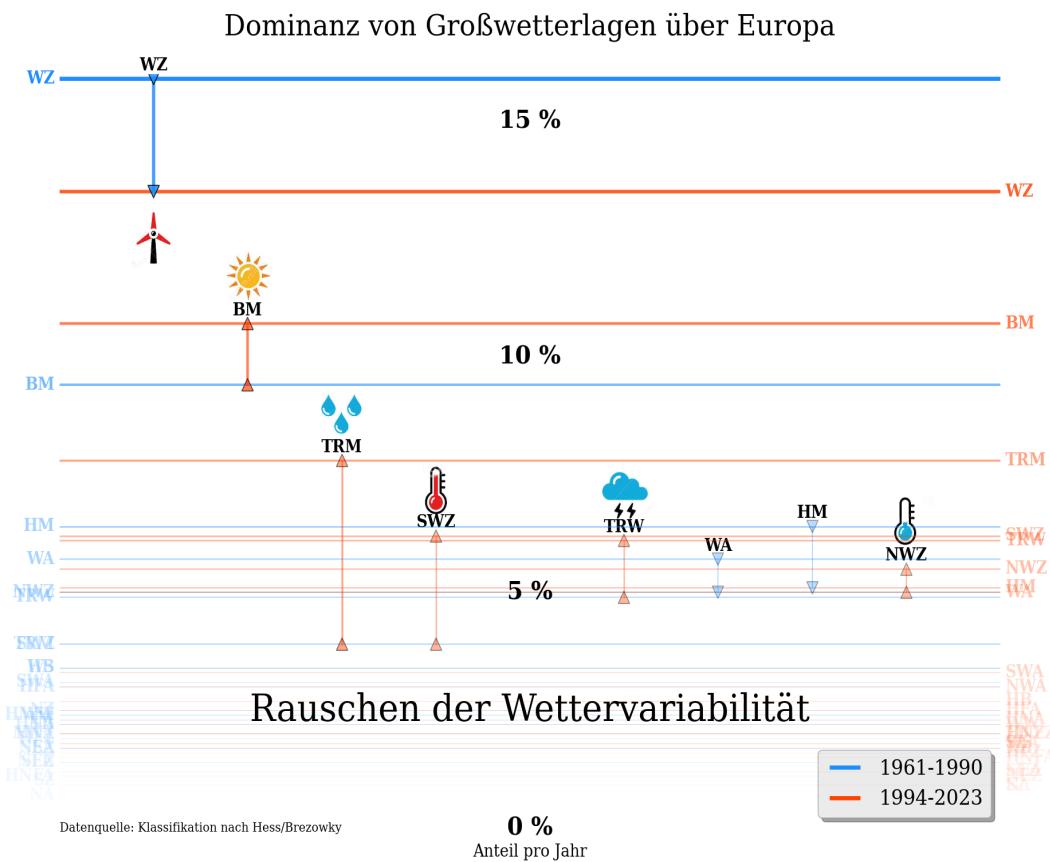
GFS 00 Forecast | European Weather-Types Sequences

© P. Hoffmann (PIK)





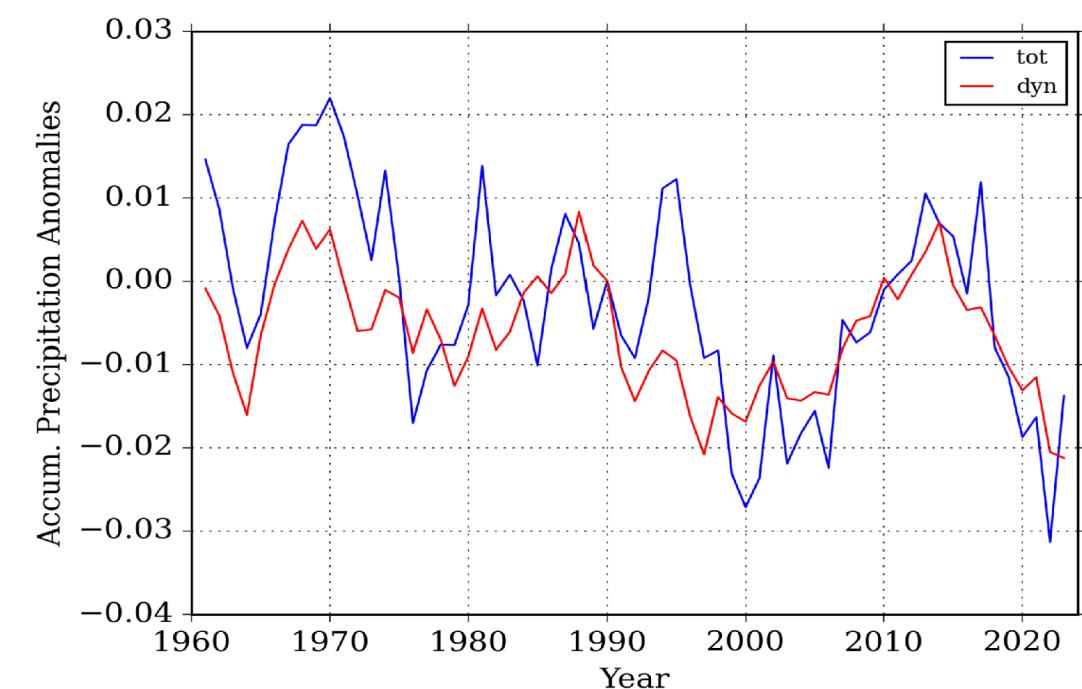
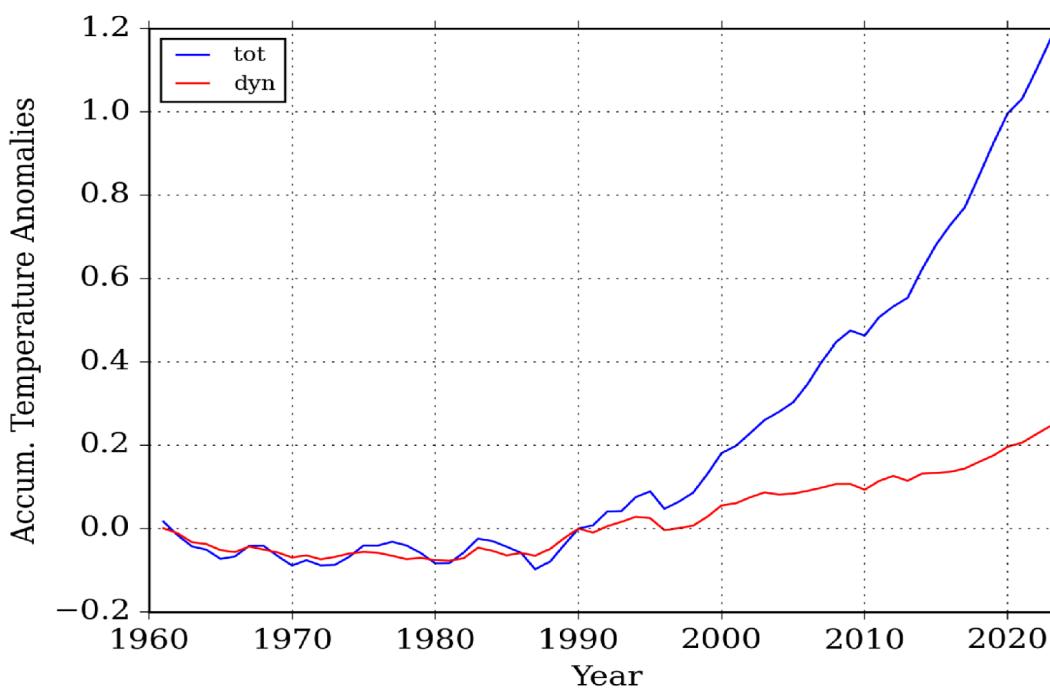
Warnsignal Klima – Wetterextreme





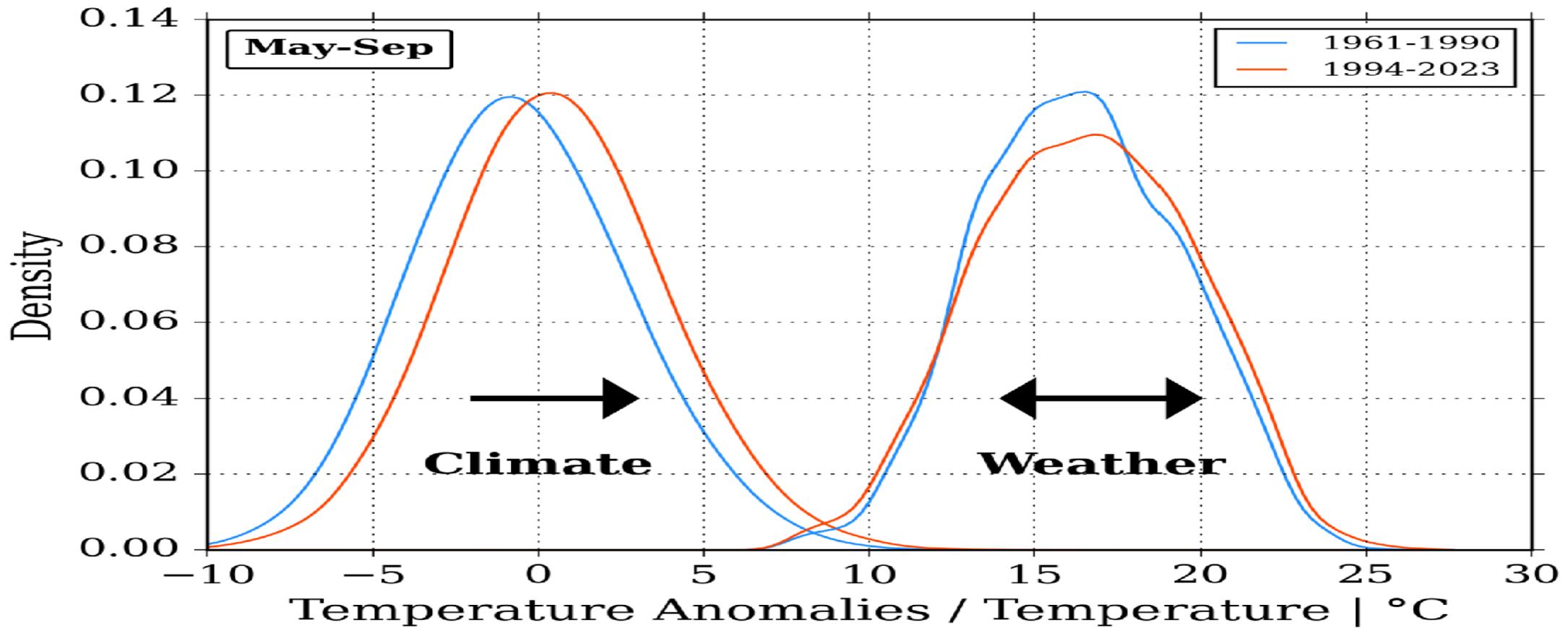
Hauptargument – f. Beschäftigung mit Großwetterlagen

Trennung des dynamischen (indirekten) Anteils am Klimawandel





Verschiebung der Verteilung für Klima und Wetter

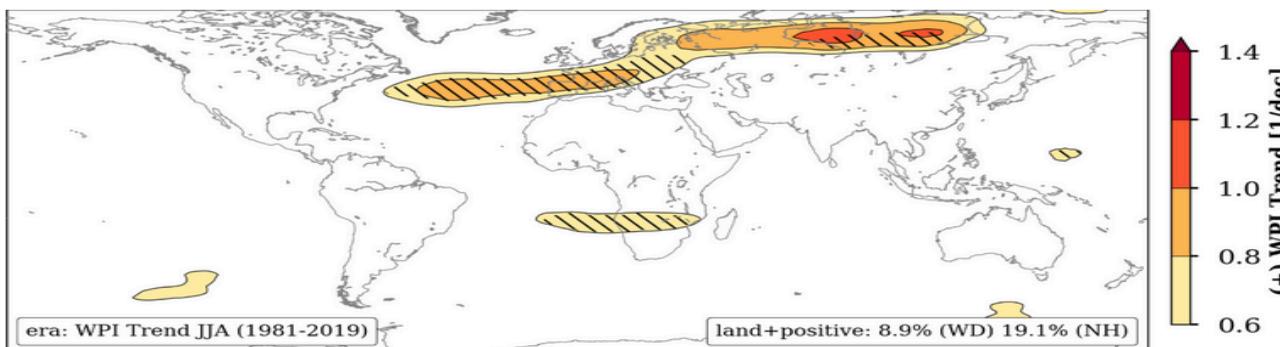




Zunahme der Wetterbeständigkeit – Sommer



12/06/2021 - Global warming makes long lasting weather situations in the Northern hemisphere's summer months more likely – which in turn leads to more extreme weather events, a novel analysis of atmospheric images and data finds. These events include heatwaves, droughts, intense rainy periods. Especially in Europe, but also in Russia, persistent weather patterns have increased in number and intensity over the last decades with weather extremes occurring simultaneously at different locations.



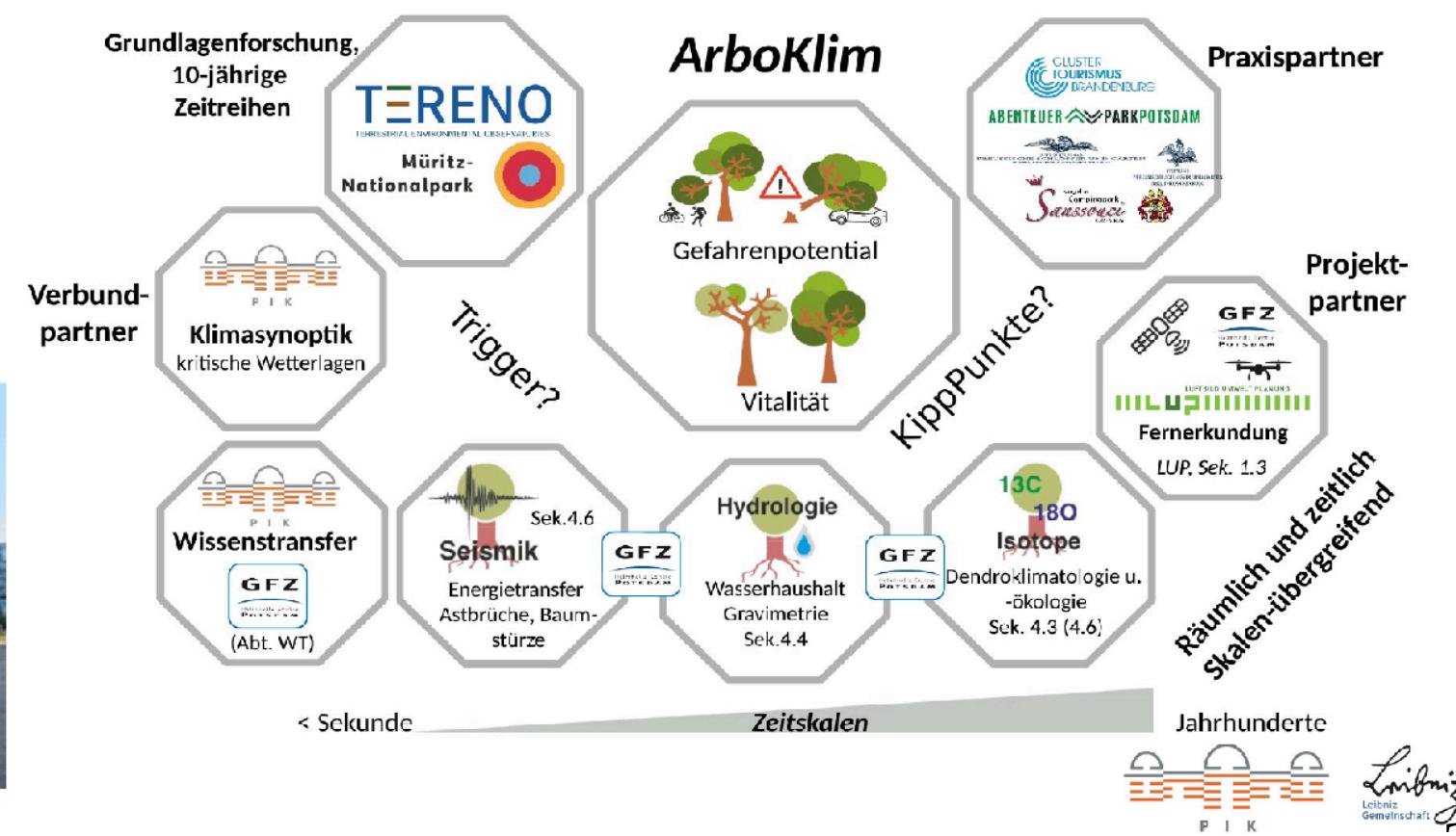


New Project: ArboKlim 2025-2028 (EFRE StaF)

Im Spannungsfeld der Klimafolgen: Potsdam als Reallabor für innovatives Monitoring

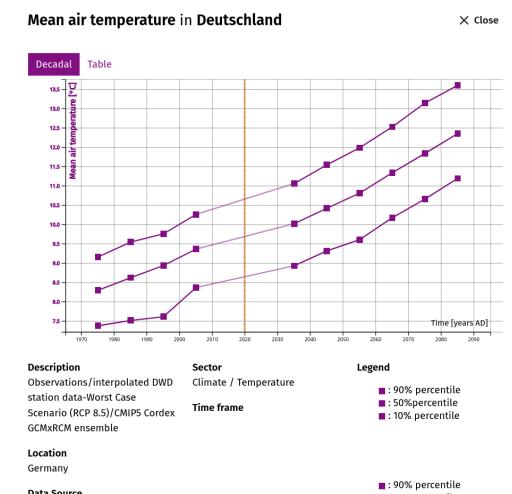
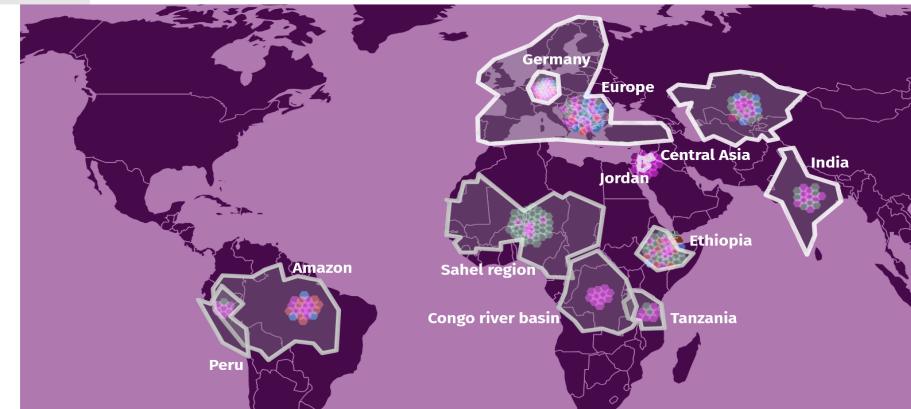
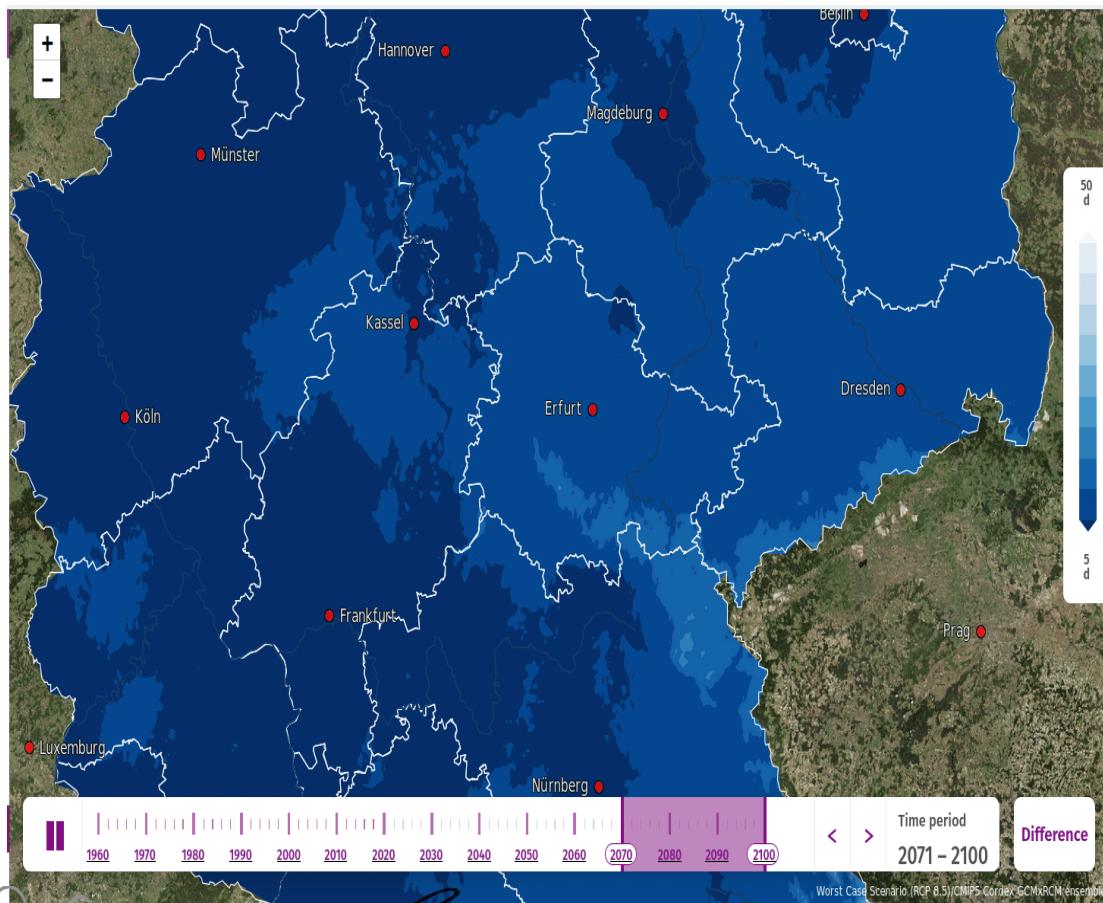
Antragsteller: **GFZ**: T. Blume (4.4), G. Helle (4.3), N. Hovius (4.6), **PIK**: P. Hoffmann (HyR)

Praxispartner: TourismusCluster Brandenburg, Stadt Potsdam, Stiftung Preussische Schlösser und Gärten Berlin-Brandenburg, AbenteuerPark Potsdam, RECRA - Freizeit-recra GmbH, Königlicher Campingpark Sanssouci, Luftbild Umwelt Planung GmbH, Potsdam





Klimafolgenonline – Wissenstransfer



Mean air temperature in Deutschland

Decadal Table

Indicator	Season 1	Season 2	Season 3	Season 4
Mean Near-Surface Air T [°C]	9.4	1.4	8.9	17.6
Total Minimum Air T in year/season [°C]	-13.2	-13.1	-5.8	5.3
Total Maximum Air T in year/season [°C]	33.5	13.7	27.2	33.4
Maximum Daily Near-Surface Air T Range [°C]	19.4	13.4	18.5	18.7
Number of summer days (>=25°C) [d]	38.1	0.0	3.8	31.2
Number of hot days (>=30°C) [d]	8.1	0.0	0.2	7.6
Number of very hot days (>=35°C) [d]	0.6	0.0	0.0	0.6
Number of tropical nights (>=20°C) [d]	0.3	-	-	-
Maximum continuous hot days [d]	3.2	-	-	-
Number of frost days [d]	81.2	-	-	-
Maximum continuous frost days [d]	21.4	-	-	-
Number of ice days [d]	18.7	-	-	-
Maximum continuous ice days [d]	7.4	-	-	-
Precipitation [mm/year]	788.9	187.4	171.4	240.5
Number of wet days [days]	129.7	34.4	29.9	34.2
Wettest day of year / season [mm]	35.7	19.6	21.9	30.2
Average snow depth [cm]	1.2	3.5	1.0	0.2
Days with at least 10cm snow depth [d]	20.0	-	-	-

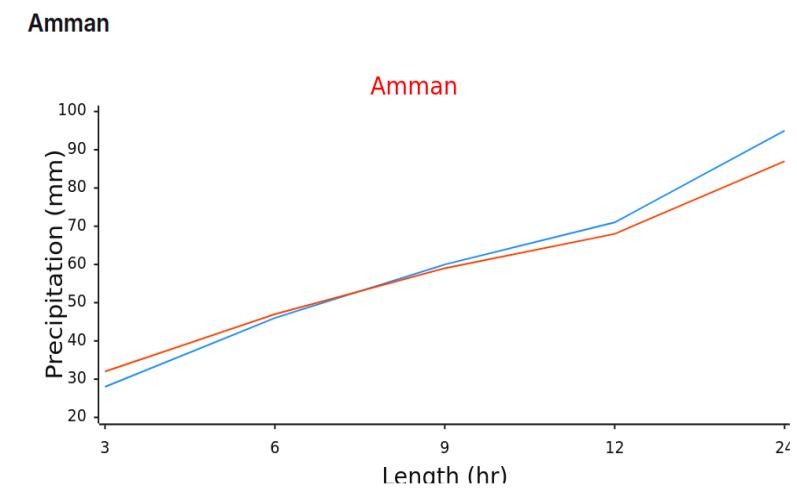
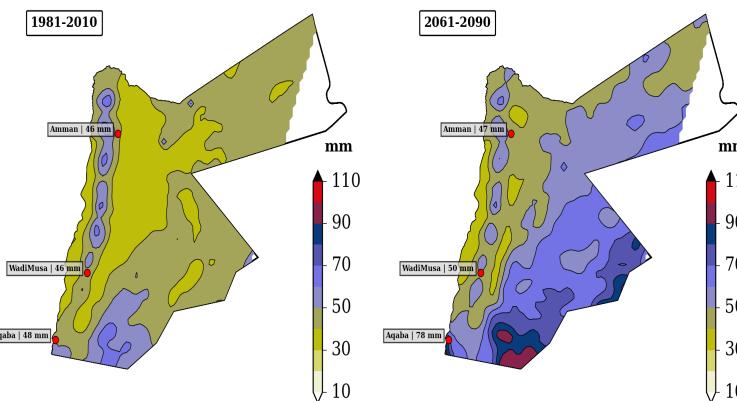
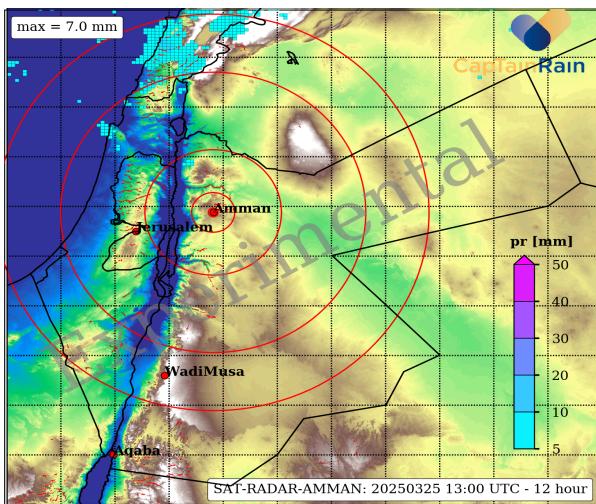
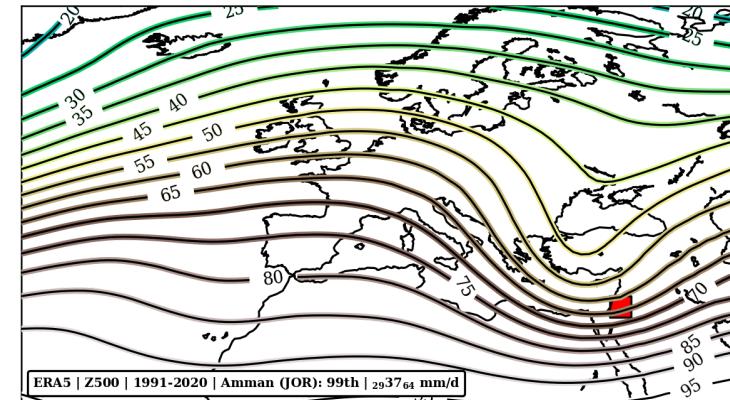
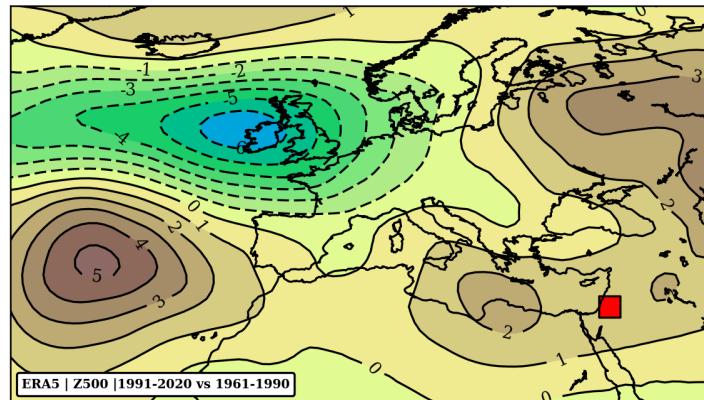
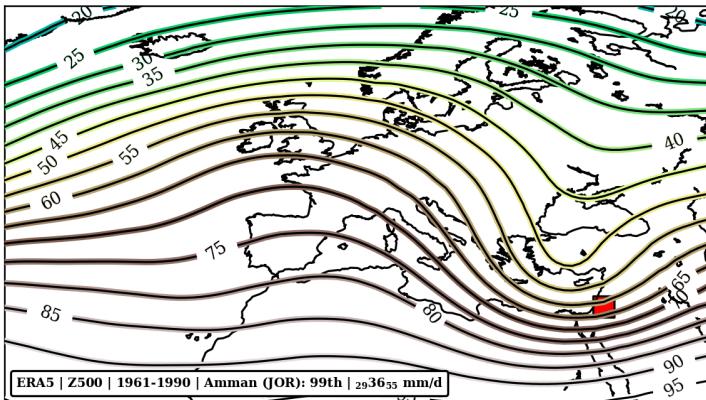


Starkregen in Jordanien - östliches Mittelmeer





Ausgewählte Ergebnisse



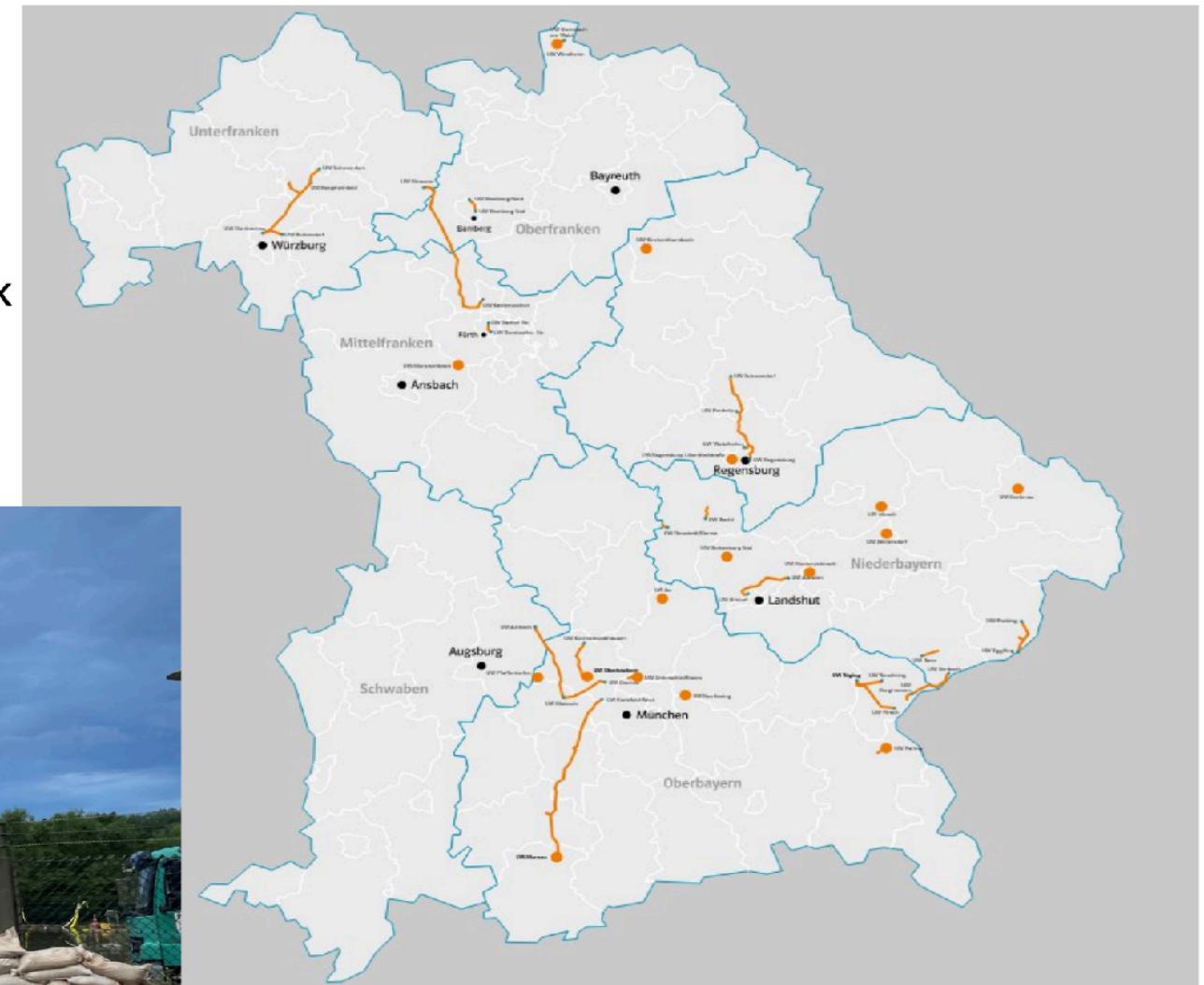


bayernwerk

Upcoming Project:

Dare to Resilience:

Stresstest Analyses for the Electricity Network



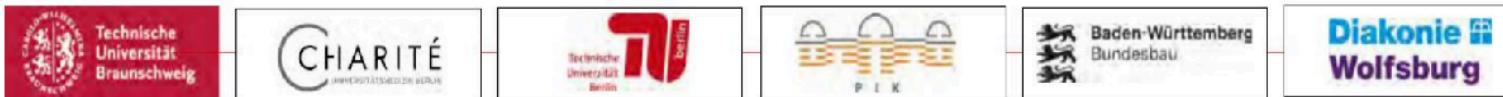
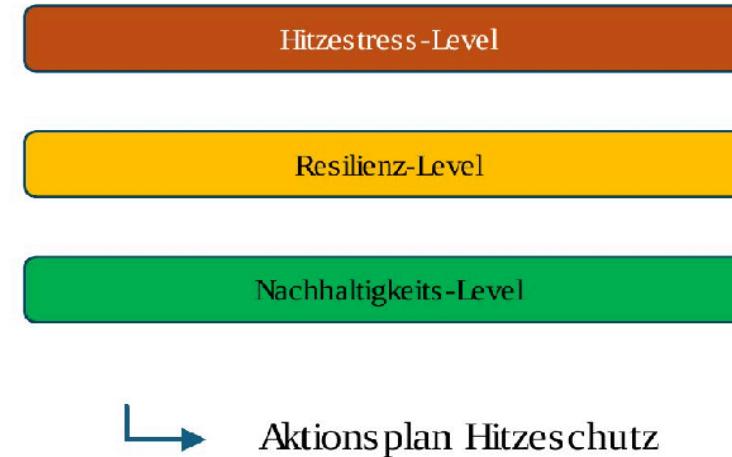
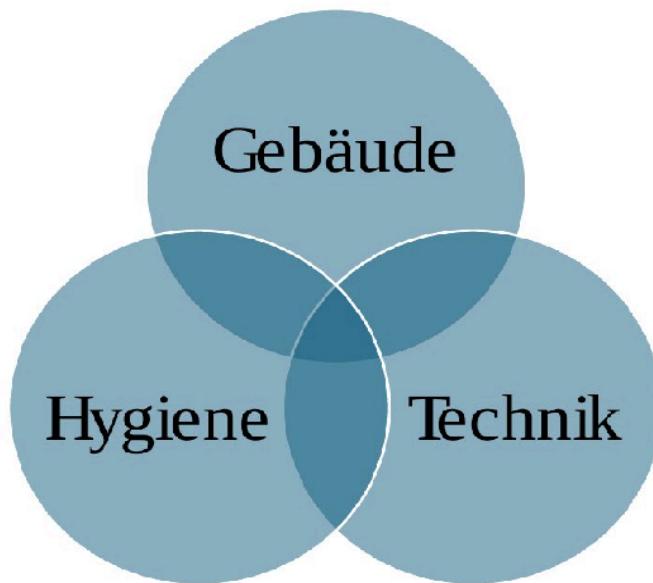


Zukunft Bau / Future Construction

Upcoming Project Proposal

Baulicher und technischer Hitzeschutz in Krankenhäusern und Pflegeeinrichtungen

Herausforderungen & Ziele



ZUKUNFT BAU
FÖRDERN FORSCHEN ENTWICKELN



Leibniz
Gemeinschaft